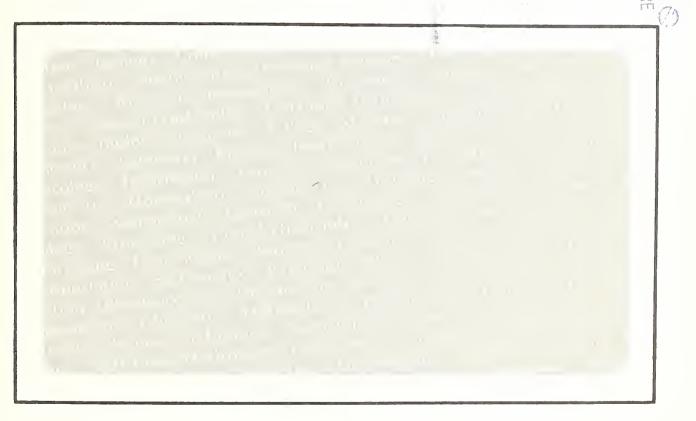
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Annotated Bibliography of the Screwworm, Cochliomyia hominivorax (Coquerel)



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ABSTRACT

Containing 621 citations, this bibliography covers most scientific papers published in the United States since 1880 on the screwworm and its suppression. Some foreign and popular literature is included. Index terms: bibliographies, Cochliomyia hominivorax (Coquerel).

This publication is available from the Southeastern Fruit and Tree Nut Research Laboratory, P.O. Box 87, Byron, Ga. 31008.

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By J. Wendell Snow, 1 A. J. Siebenaler, 2 and F. G. Newell²

INTRODUCTION

The screwworm, Cochliomvia hominivorax (Coquerel), is an obligate parasite of the flesh of warmblooded animals. Humans are not an exception to its parasitism (Laake 1936). Wilbarger (1890) references an apparent human case of screwworms as early as 1832; however, Laake et al. (1936) report that the first authentic record of a screwworm case in the United States occurred in 1882. Screwworms have probably been in the southwestern United States since their evolution as a species, but they did not become established in the southeastern United States until 1933 (Bruce 1952). A survey in 1935 showed that screwworms were distributed throughout the Southeast, Southwest, and Midwest (Dove and Bishop 1936). At that time, injuries and death of livestock resulted in estimated annual losses of \$10 million (Laake and Cushing 1930). By 1958, when the Southeastern Screwworm Eradication Program was begun, livestock losses were estimated at \$40 million annually (Knipling 1959). Today, as a result of the southeastern and southwestern eradication programs, active screwworm cases are found only in Texas, Arizona, New Mexico, and California. Within these States the species is usually below economic levels, and a new program with Mexico promises to eradicate screwworms completely from the United States. Without an eradication program in the United States, livestock losses would be about \$300 million annually.

This bibliography includes most of the scientific papers on screwworms published in the United States since 1880 and many articles from popular magazines. Foreign literature was not reviewed extensively, but many articles in Spanish, French, and German are included.

Nomenclatural and taxonomic ambiguity exists in early U.S. literature because the differences between *Cochliomyia hominivorax* (primary screwworm) and *Cochliomyia macellaria* (secondary screwworm) were not recognized prior to Cushing and Patton (1933). The synonyms for *C. hominivorax* (Coquerel) cited in references are *Calliphora anthropophaga* (Conil), *Callitroga americana* (Cushing & Patton), *Callitroga hominivorax* (Coquerel), *Chrysomyia macellaria* (Fabricius),

¹Entomologist, Screwworm Research Laboratory, Science and Education Administration, U.S. Department of Agriculture, P.O. Box 986, Mission, Tex. 78572. Present address: Southeastern Fruit and Tree Nut Research Laboratory, Science and Education Administration, U.S. Department of *Agriculture, P.O. Box 87, Byron, Ga. 31008.

²Biological technician, Screwworm Research Laboratory, Science and Education Administration, U.S. Department of Agriculture, P.O. Box 986, Mission, Tex. 78572.

Cochliomyia americana (Cushing & Patton), Cochliomyia macellaria (Fabricius), Compsomyia macellaria (Fabricius), Lucilia hominivorax (Coquerel), and Lucilia macellaria (Fabricius).

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; Snow, J. W.; Mackley, J. W.; and Smith, F. E. [In press.] Effectiveness of the screwworm (Diptera:Calliphoridae) eradication program during 1978 in the United States and Mexico. [Submitted to APHIS Series.] In 1978, a total of 7,230 screwworm cases were reported in the United States with the majority of these cases occurring in Arizona. Numerous cases were also reported in New Mexico and western Texas, and the screwworm threatened to invade the area of southern Texas where they are able to overwinter. Adoption of a new fly strain, improvements in dispersal techniques and survey procedures, and production from the Mexico plant resulted in stopping the southern movement of the screwworm, and 1978 was considered a relatively successful year for the program.

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